

Participant Questionnaire

Participant number: 4

Date: 7/4/2023

Location: Brescia, IT

HRC Study / Algorithms tested: HAMP, STAP, PPE

Study Conducted by: Jared Flowers

Participant link lengths/dimensions: (meters, "spine" is pelvis to shoulder midpoint, "shoulders" is shoulder to shoulder)

Spine	<u> </u>
Neck	<u> </u>
Shoulders	<u>.29</u>

Left Upper Arm	<u>.34</u>
Left Forearm	<u>.24</u>

Right Upper Arm	<u>.33</u>
Right Forearm	<u>.24</u>

Participant joint diameter: (meters)

Left Elbow	<u>.09</u>
Left Wrist	<u>.06</u>

Right Elbow	<u>.09</u>
Right Wrist	<u>.06</u>

Questions:

- A. How safe did you feel? (0 is not safe at all, 5 is neutral, 10 is very safe)
- B. Do you think the robot hindered your motions during the task? (0 is robot completely prevented your motions, 5 is neutral, 10 is robot did not impede you motion)
- C. Did the robot perform logical motions? (0 is robot motions made no sense to you, 5 is neutral, 10 is robot motions made sense to you)
- D. What is your overall satisfaction with the HRC task? (0 is you would not work in this HRC cell again, 5 is neutral, 10 is you enjoyed working in this cell with the robot)

For Task 1 (engine parts): (circle your answer to each question)

Task 1, Method 1:											3
Question A: (0 is not safe at all, 5 is neutral, 10 is very safe)											
0	1	2	3	4	5	6	7	8	9	10	
Question B: (0 is robot completely prevented your motions, 5 is neutral, 10 is robot did not impede you motion)											
0	1	2	3	4	5	6	7	8	9	10	
Question C: (0 is robot motions made no sense to you, 5 is neutral, 10 is robot motions made sense to you)											
0	1	2	3	4	5	6	7	8	9	10	
Question D: (0 is you would not work in this HRC cell again, 5 is neutral, 10 is you enjoyed working in this cell with the robot)											
0	1	2	3	4	5	6	7	8	9	10	

Task 1, Method 2:											1
Question A: (0 is not safe at all, 5 is neutral, 10 is very safe)											
0	1	2	3	4	5	6	7	8	9	10	
Question B: (0 is robot completely prevented your motions, 5 is neutral, 10 is robot did not impede you motion)											
0	1	2	3	4	5	6	7	8	9	10	
Question C: (0 is robot motions made no sense to you, 5 is neutral, 10 is robot motions made sense to you)											
0	1	2	3	4	5	6	7	8	9	10	
Question D: (0 is you would not work in this HRC cell again, 5 is neutral, 10 is you enjoyed working in this cell with the robot)											
0	1	2	3	4	5	6	7	8	9	10	

Task 1, Method 3:											2
Question A: (0 is not safe at all, 5 is neutral, 10 is very safe)											
0	1	2	3	4	5	6	7	8	9	10	
Question B: (0 is robot completely prevented your motions, 5 is neutral, 10 is robot did not impede you motion)											
0	1	2	3	4	5	6	7	8	9	10	
Question C: (0 is robot motions made no sense to you, 5 is neutral, 10 is robot motions made sense to you)											
0	1	2	3	4	5	6	7	8	9	10	
Question D: (0 is you would not work in this HRC cell again, 5 is neutral, 10 is you enjoyed working in this cell with the robot)											
0	1	2	3	4	5	6	7	8	9	10	

Comments: Experience: 2

Most afraid of robot, waited for robot to leave workspace before assembling

For Task 2 (Sharework parts: metal tabs, cylinders, pallets): (circle your answer to each question)

Task 2, Method 1:											3
Question A: (0 is not safe at all, 5 is neutral, 10 is very safe)											
0	1	2	3	4	5	6	7	8	9	10	
Question B: (0 is robot completely prevented your motions, 5 is neutral, 10 is robot did not impede you motion)											
0	1	2	3	4	5	6	7	8	9	10	
Question C: (0 is robot motions made no sense to you, 5 is neutral, 10 is robot motions made sense to you)											
0	1	2	3	4	5	6	7	8	9	10	
Question D: (0 is you would not work in this HRC cell again, 5 is neutral, 10 is you enjoyed working in this cell with the robot)											
0	1	2	3	4	5	6	7	8	9	10	

Task 2, Method 2:											1
Question A: (0 is not safe at all, 5 is neutral, 10 is very safe)											
0	1	2	3	4	5	6	7	8	9	10	
Question B: (0 is robot completely prevented your motions, 5 is neutral, 10 is robot did not impede you motion)											
0	1	2	3	4	5	6	7	8	9	10	
Question C: (0 is robot motions made no sense to you, 5 is neutral, 10 is robot motions made sense to you)											
0	1	2	3	4	5	6	7	8	9	10	
Question D: (0 is you would not work in this HRC cell again, 5 is neutral, 10 is you enjoyed working in this cell with the robot)											
0	1	2	3	4	5	6	7	8	9	10	

Task 2, Method 3:											2
Question A: (0 is not safe at all, 5 is neutral, 10 is very safe)											
0	1	2	3	4	5	6	7	8	9	10	
Question B: (0 is robot completely prevented your motions, 5 is neutral, 10 is robot did not impede you motion)											
0	1	2	3	4	5	6	7	8	9	10	
Question C: (0 is robot motions made no sense to you, 5 is neutral, 10 is robot motions made sense to you)											
0	1	2	3	4	5	6	7	8	9	10	
Question D: (0 is you would not work in this HRC cell again, 5 is neutral, 10 is you enjoyed working in this cell with the robot)											
0	1	2	3	4	5	6	7	8	9	10	

Comments: T2-m4: A 6 B 5 C 7, D 7
T2-m5: A 5 B 6 C 4 D 5